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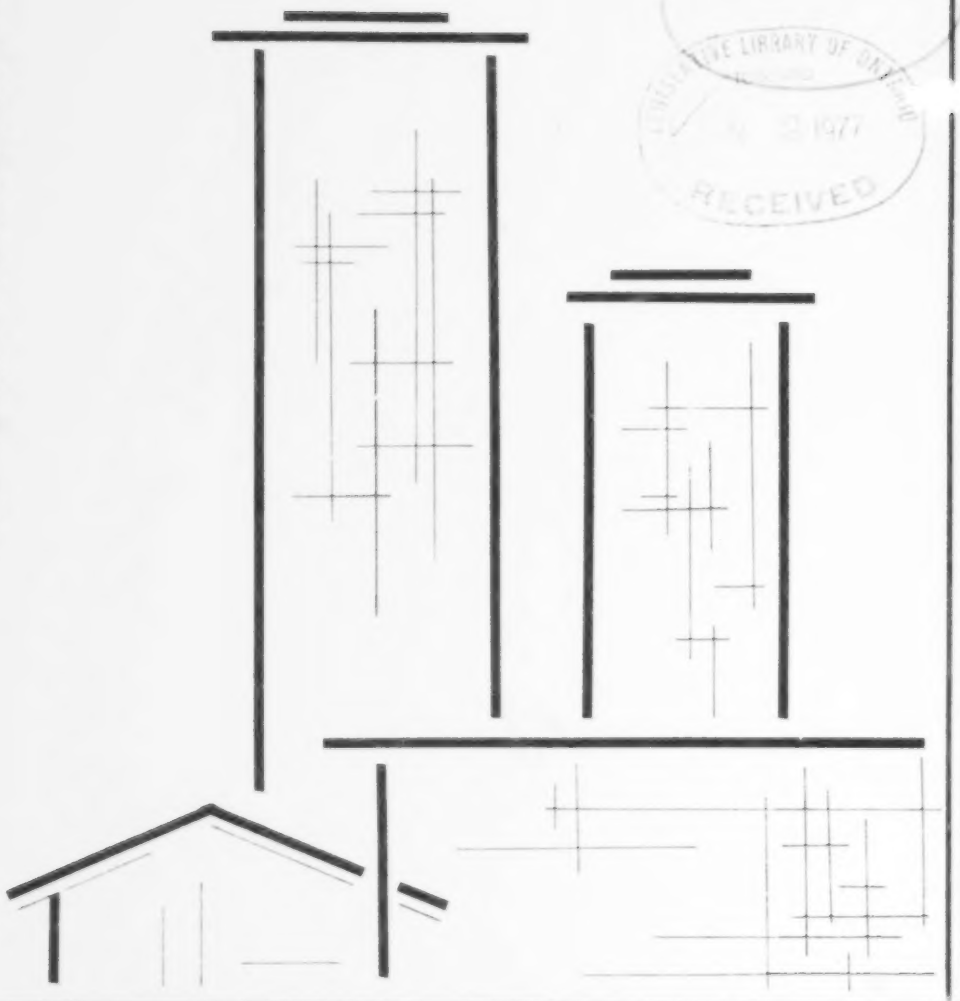

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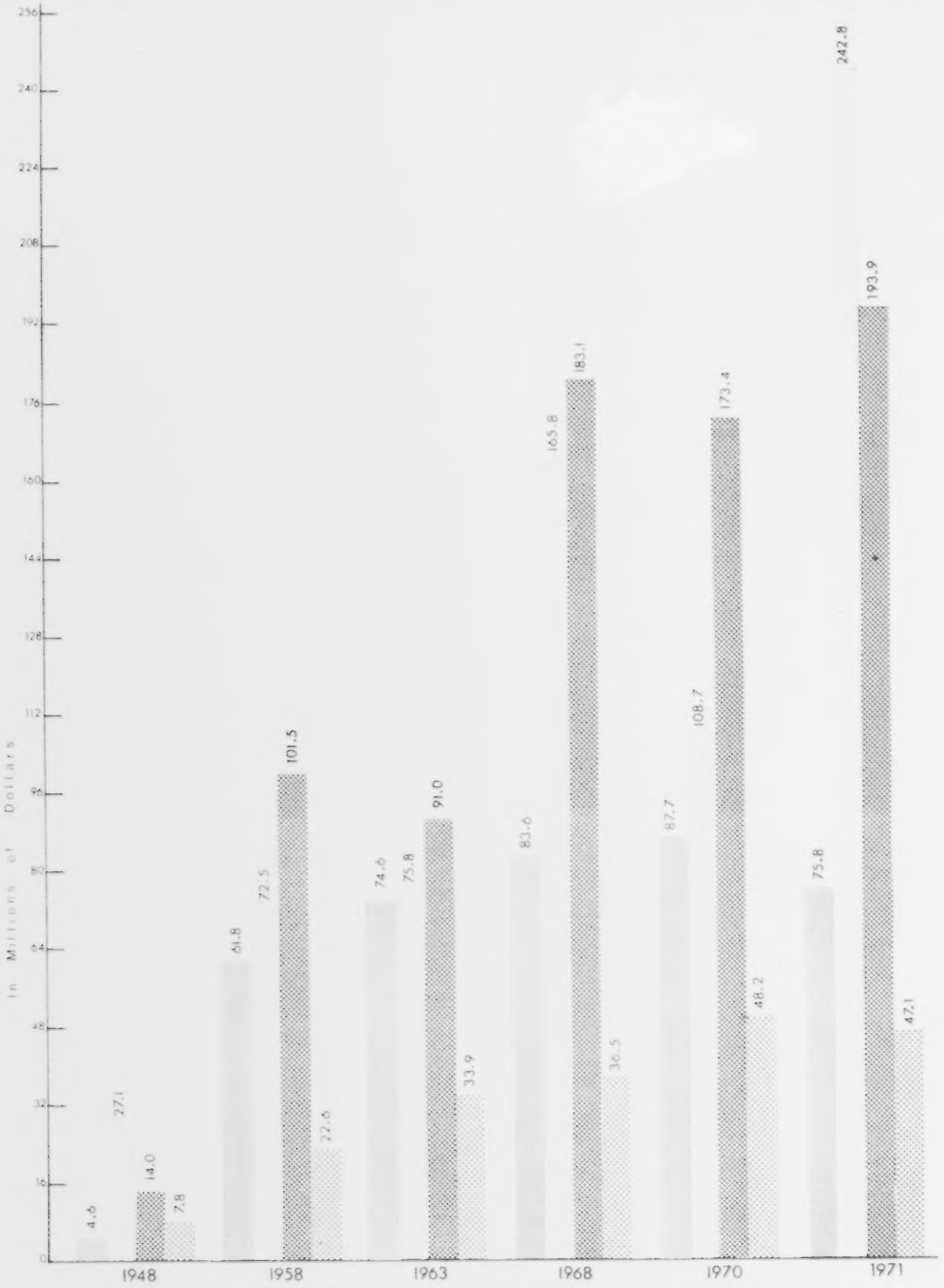

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REPORT OF THE COMMITTEE

ON UNIFORM BUILDING STANDARDS FOR

A L B E R T A

May, 1972

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May 30th, 1972

To The Honourable D. J. Russell
Minister of Municipal Affairs

Honourable Minister:

The Committee appointed November 24th, 1970, to study and report on the feasibility of uniform building standards based on The National Building Code has the honour of presenting its report.

Respectfully submitted:

J. N. Polonuk, Chairman

A. E. Bridges

H. D. Collins

N. M. Fleming

P. Li

W. A. Milligan

W. Weir

MEMBERS OF COMMITTEE

MEMBERS:

John N. Polonuk, Chairman
Deputy Director of Planning
Department of Municipal Affairs
8th flr., 9912 - 107th Street, Edmonton
Telephone: 429-4821

Austin E. Bridges, Provincial Fire Commissioner
Department of Labour
Financial Building, Edmonton
Telephone: 229-3253

Harold D. Collins, Director of Building Inspection Branch
City of Edmonton
City Hall, Edmonton
Telephone: 424-0211, Ext. 359

Norman M. Fleming, Chief Architect
Department of Public Works
Architectural Branch
Terrace Building, Edmonton
Telephone: 229-3939

Pai-Lin Li, Chief Building Inspector
City of Calgary
City Hall, Calgary
Telephone: 269-0851, Ext. 358

William A. Milligan, Chief Provincial Plumbing Inspector
Department of Labour
I.B.M. Building, Edmonton
Telephone: 424-3821

William (Scotty) Weir, Head of Technical Division
Alberta Housing Corporation
11810 Kingsway Avenue, Stanley Building, Edmonton
Telephone: 453-3511

ADVISORS TO THE COMMITTEE:

Legal - David W. Axler, Solicitor, Department of the Attorney General

Administrative - A. John Kerstens, Planner, Department of Municipal Affairs

PREFACE

The Executive Council received and approved the following submission by the Minister of Municipal Affairs on the subject of uniform building standards for Alberta.

"The adoption of The National Building Code of Canada by municipalities has been urged throughout Canda for a number of years by construction associations, architects, engineers and home builders.

These groups and individuals concluded that uniform building standards would result in a saving in cost, whether in planning, designing, processing or in actual building. For these reasons, and in the interest of public safety and health, the Department of Municipal Affairs has over the years been urging municipalities to adopt and enforce The National Building Code. Building standards may be adopted by municipalities through provision of The Municipal Government Act or The Planning Act.

In 1968 the national emphasis shifted to urging the adoption of The National Building Code at the provincial level. Several provinces now are investigating the feasibility of uniform provincial standards. Ontario has received a report of a special committee on uniform building standards for that province in which sweeping recommendations are made, the most significant of which is:

> *"That commencing with 1970 Edition, The National Building Code of Canada, and a supplement, be adopted by the Province of Ontario to form a uniform building code that shall be mandatory throughout the province. This code would be called the National Building Code of Canada 1970 and the Ontario Building Code 1970, hereinafter referred to in this report as the National-Ontario Building Code."*

During the spring of this year the Department of Municipal Affairs undertook an examination of the status of building standards at the municipal level. The questionnaire indicated that nine cities

use The National Building Code as the base for their standards, as well as seventy-one towns, twenty-seven villages, four summer villages, ten counties and three municipal districts. Some one hundred and eighty-seven municipalities do not use The National Building Code or any other code for that matter. From our findings it has become evident that left to their own, municipalities would probably never all adopt The National Building Code and even if they did, would change its provisions substantially, thus defeating the object of uniformity.

This Government's involvement and leadership in achieving uniform standards is, at this time, urgent and essential. The dynamic growth of Alberta will continue and the unimpeded development of our technological capability based on uniform building standards is vital to satisfy the shelter needs of industry, commerce and most importantly, the families of Alberta.

The 1970 (Fifth) Edition of The National Building Code has now been published and released.

It is timely therefore, that studies be undertaken on the feasibility of making a uniform building code mandatory for all municipalities and other provincial jurisdictions.

I propose that a small committee be established to study and report on the feasibility of a uniform building standard for Alberta as well as other issues connected with such standards."

On November 24th, 1970, the Minister announced the establishment of a Committee on Uniform Building Standards for Alberta; the Committee being composed of individuals who were knowledgeable and experienced about buildings and building bylaws to examine all essential facets of uniform building standards.

TERMS OF REFERENCE AND OBJECTIVES OF THE COMMITTEE

TERMS OF REFERENCE

To study and report on the feasibility and adoption of an uniform building standard based on The National Building Code for mandatory use throughout the province.

The Committee shall also consider and recommend on:

(a) procedures for dealing with appeals, amendments and interpretation of uniform building standards;

(b) achieving a satisfactory level of enforcement of building standards and of building inspection; and

(c) all legislation and regulations of the Government of the Province of Alberta pertaining to building standards.

The Committee may appoint such specific committees and special advisors as it deems necessary to finalize its report. The Committee may consult with the Associate Committee on The National Building Code, National Research Council of Canada.

The Committee shall not expend or commit the expenditure of funds.

OBJECTIVES

The principle objective of the Committee was to determine if it was desirable and feasible to have a uniform building code based on The National Building Code for the Province of Alberta that would be mandatory for all municipalities and other provincial jurisdictions.

A further objective was to determine to what degree and in what manner existing provincial Acts, Regulations and departmental policies can be dealt with effectively. Could they be resolved to agree with The National Building Code or must they be added to the Code and how can this be accomplished.

Another objective was to determine what procedures would give uniform and effective enforcement and interpretation of the Code in all municipalities of the province; and to determine what existing Acts and Regulations will require study and possible revision or even repeal.

Finally, that the province will have a Code that is rational in its requirements, free of provisions that lack a base in fact or proof, capable of enforcement without the development of a rigid or insensitive bureaucracy; once that is administered in a manner that allows the public ready methods of appeal as to content and enforcement and that is capable of regular updating through efficient revision procedures.

REVIEW OF PROCEDURE

The Committee held its first meeting on January 15th, 1971, which was attended by both the Minister and Deputy Minister of the Department of Municipal Affairs.

A most useful discussion ensued on the terms of reference and the broad objectives of the Government in considering uniform building standards.

Further committee meetings were held on:

January 21st, 1971	April 1st, 1971
January 28th, 1971	
	June 18th, 1971
February 4th, 1971	
February 11th, 1971	August 18th, 1971
February 18th, 1971	
February 25th, 1971	September 2nd, 1971
	September 14th, 1971
March 4th, 1971	September 23rd, 1971
March 11th, 1971	
March 18th, 1971	October 6th & 7th, 1971
March 25th, 1971	February 24th & 25th, 1972

Public Hearings were held as follows:

Grande Prairie	April 19th, 1971
Peace River	April 21st, 1971
Camrose	May 3rd, 1971
St. Paul	May 5th, 1971
Lethbridge	May 17th, 1971
Medicine Hat	May 19th, 1971
Red Deer	May 31st, 1971
Calgary	June 2nd, 1971
Edmonton	June 14th & 15th, 1971

Special meetings were called on April 27th, 1971, to meet with Mr. Jack Robertson, Secretary to the Associate Committee on The National Building Code, National Research Council and on May 3rd, 1971, at Camrose to meet with representatives of the Alberta Fire Chief's Association.

The discussions at the first few meetings explored the problems to be resolved and procedures to be followed in finalizing the report. It was realized by the Committee, at the outset, that it was not going to be a simple task to reach its objectives and that the study would need to be broad and thorough to cover all aspects and problems of an uniform building code and its enforcement.

To help organize its work, a study and report schedule was prepared (Appendix "B") which was found to be of invaluable assistance. Although the date lines prescribed in the schedule were not in every instance met, control and management of the study was aided substantially by following the schedule.

It was decided that the Committee should undertake a clause by clause review of The National Building Code. Correspondence and meetings with government departments and agencies aided the Committee significantly in its investigation of the many Acts and Regulations of provincial departments concerned with building legislation.

The Committee found that the questionnarie previously distributed to all municipalities by the Department of Municipal Affairs provided valuable resource data and a broad cross-section of opinions about the basis and implementation of an uniform building standard for Alberta. The questionnaire was sent to 326 municipalities and 309 returned the questionnaire with their answers. (For a tabulated record of the returns, see Appendix "D").

Associations and other organizations primarily connected with building construction were contacted for their comments. Many comprehnsive and well prepared briefs were received and in several cases these were reviewed with the respondents at the public hearings.

CONCLUSIONS

After careful study of the opinions and comments received from municipalities and from industry and government, the Committee came to the following conclusions:

1. That the advantages of adoption of an uniform building standard for the province are indisputable. The desirable overall framework for achieving this objective will require careful study and planning for the orderly evolution from established procedures now operating in the province.
2. That there will have to be a period of transition before The National Building Code can be adopted without change. During this time, provisions not now covered or inadequately covered by The National Building Code that are necessary to Alberta would be included as supplementary provisions.
3. That there is unprecedented support to the principle of an uniform building standard for Alberta and for provincial involvement and leadership in matters connected therewith. Success in achieving the desirable objectives will depend entirely on provincial commitment to the program as well as technical and administrative involvement.

Based on these considerations, the Committee makes the following recommendations:

RECOMMENDATIONS

1. UNIFORM BUILDING STANDARD

That The National Building Code of Canada, 1970 Edition, supplemented as necessary, be adopted by the Province of Alberta to form an uniform building standard that shall be mandatory for use throughout the province. The uniform building standard is hereinafter referred to as "The Alberta Building Code".

2. LEGISLATION

(a) That appropriate Legislation be introduced to provide for the adoption of The Alberta Building Code by January 1973.

(b) That the present Acts, Regulation, departmental policies and any conflicting municipal bylaw, insofar as they deal with buildings, be repealed or revoked and replaced with The Alberta Building Code at the time this Code comes into force and thereafter, that no additions, deletions, or amendments be made except through the medium of this Code.

The Committee further recommends that the Government consider the alternative of introduction of the Bill at the proposed fall session of the Legislature with promulgation at the next ensuing session. Although this procedure might mean a delay of three or four months before adoption of The Alberta Building Code, the resulting Legislation for the Code and arrangements for technical and administrative matters may benefit.

3. ALBERTA BUILDING CODE ADVISORY COMMITTEE

That an Alberta Building Code Advisory Committee be formed immediately. The Committee shall:

(a) Prepare an Alberta Building Code based on The National Building Code of Canada to include matters not covered, or inadequately covered, in The National Building Code that are deemed essential for Alberta.

(b) Prepare and recommend appropriate Legislation. To undertake a review (in co-operation with the departments concerned) of all Acts, Regulations and departmental policies pertaining to buildings presently in force in the province and to recommend on their repeal or amendment. The review should be broad in scope and include consideration of such items as signs, factory produced buildings and components and minimum maintenance standards for buildings and property.

(c) To recommend methods for:

(i) uniform interpretation and enforcement of The Alberta Building Code;

(ii) the approval of a new material or method of construction;

(iii) appeals and related procedures; and

(iv) amendments to The Alberta Building Code.

(d) Consider The National Fire Code and recommend on the possible adoption of the Code as an Alberta standard.

(e) Liaise with the National Research Council on building standards and make recommendations on necessary representation to the Council on provisions of The National Building Code as may be required.

(f) The Alberta Building Code Advisory Committee should remain operative until such time as appropriate Legislation is enacted and adequate arrangements are made for administration of the new program.

4. ADMINISTRATION

That the Department of Labour be responsible for, and administer, The Alberta Building Code. The appointment of administrative personnel will be required to expedite and give effect to these recommendations.

The Department of Labour, at this time, administers several related statutes through Branches as follows:

Act	Administration
The Gas Protection Act	Gas Protection Branch
The Elevator and Fixed Conveyances Act	Elevator and Fixed Conveyances Branch
The Boiler and Pressure Vessels Act	Boilers Branch
Department of Labour Act (Alberta Plumbing and Drainage Regulations)	Plumbing Inspection Branch
Electrical Protection Act	Electrical Protection Branch
Fire Prevention Act	Fire Prevention Branch
Amusements Act	Amusements Branch

Apart from administering the Acts and Regulations thereunder, each of the Branch's employs inspectors and undertakes inspections of building components.

It is further recommended that the Branches be formed into a division of the Department of Labour and that a functional review be made of other departments relating to building with a view to centreing such functions within the division.

5. ALBERTA BUILDING STANDARDS ADVISORY COUNCIL

It is recommended that the Legislation provide for the appointment, by the Minister, of an Alberta Building Standards Advisory Council and prescribe its functions to include:

(a) Providing assistance on any matter related to The Alberta Building Code.

(b) Considering and recommending on proposed amendments to The Alberta Building Code.

(c) Upon referral to the Council considering and deciding on matters of interpretation and the intent of The Alberta Building Code.

(d) Recommending upon needed research and undertaking research when so required.

(e) Providing continuous liaison with the National Research Council.

Representation on the Council should be sufficiently broad to be representative of the construction industry, associations and agencies involved in technical and/or administrative appointments of the following groups should be included in the consideration:

Alberta Municipalities

The Alberta Association of Architects

Association of Professional Engineers, Geologists, and Geophysicists of Alberta

The Alberta Construction Association

Alberta Housing Council of the National House Builders Association

Housing and Urban Development Association

Urban Development Institute

Electrical Contractors Association of Alberta

Mechanical Plumbing Contracting Association

Master Heating and Sheet Metal Contracting Association

Canadian Standards Council

6. APPLICATION OF THE ALBERTA BUILDING CODE

That the Legislation provide for the mandatory application of The Alberta Building Code throughout the province subject only to such exemptions of areas or classes of building construction which may be specifically designated by Order of the Minister upon receipt of an application by a council.

7. ENFORCEMENT AND INSPECTION

(a) That responsibility for enforcing The Alberta Building Code remain with the municipalities.

(b) The Department provide technical and administrative assistance to municipalities on matters of interpretation and procedure.

(c) The Department provide assistance to those municipalities where population, population density or amount of buildings would mitigate against employment of full time building inspectors.

Assistance could include:

(i) a plan checking service;

(ii) an inspection service for large or complex buildings and for buildings of public assembly; and

(iii) encouragement and arrangements for municipal employment of building inspectors on a regional or inter-municipal basis.

(d) The Department institutes and encourages programs to provide for:

(i) the technical upgrading of inspectors;

(ii) educational training courses for inspectors; and

(iii) the certification of inspectors.

8. COMMITTEE's FUTURE

That this Committee - The Committee on Uniform Building Standards - not be dissolved, but instead be adjourned until such time as the Alberta Building Code Advisory Committee is formed.

It was not the purpose of the Committee to write a code for building or to recommend specific Legislation or amendments to Legislation. Rather, it was to report on the feasibility of a uniform building code based on The National Building Code for general application throughout the province and on associated matters.

The Committee has nonetheless obtained a wealth of knowledge and material related to code provisions, legislation and procedures which should be made available to the Department of Labour and to the recommended new Committee.

Consideration should also be given in the interest of continuity and economy to the appointment of committeemen Collins and Pai-Lin Li to the Alberta Building Code Advisory Committee. These gentlemen represented the Councils of the Cities of Edmonton and Calgary respectively on the Committee. As heads of the Building Departments of the two cities, they are amongst the most knowledgeable resource personnel in the province on the technical aspects of building and on administrative and procedural problems.

APPENDICES

APPENDIX "A"

COMMENTARY

UNIFORM BUILDING STANDARD

During the course of the Committee's deliberation there evolved an ever increasing commitment to the principle that The National Building Code and its associated documents should form the base and the major part of a uniform building code for the Province of Alberta.

It is expected that the proposed Building Code Advisory Committee will recommend substantial amendments to Part I of The National Building Code (Administration) depending on Legislative provisions. The Plumbing and Drainage Regulation of the province has now been rewritten and updated and should be included and form Part 7 of the Code. The remaining parts could be adopted with little or no change. Reference to the National Research Council on matters of inconsistency or where provisions of The National Building Code are considered ambiguous or inadequate would be preferred to provincial amendment.

The holding of further public hearings would be unnecessary and repetitious; however, it would be desirable to provide opportunities for comment on The Alberta Building Code when finalized.

The National Building Code is a "living" document always receptive to change and improvement in the national interest.

Alberta, to date, has had no formal procedure for dealing effectively in the development of The National Building Code or on proposed amending provisions, admittedly however, many Albertans have participated on the Associate Committee and its Standing Committees.

The recommended departmental structure assisted by the Alberta Building Advisory Council would provide an effective vehicle for transmitting representative submissions on the Alberta viewpoint and province-wide needs.

With the growing recognition that national uniformity in this matter of building standards will yield substantial benefits to Canadians, it is to be expected that inter-provincial dialogue will be necessary to achieve the desirable objectives. The province should be prepared to provide leadership and take an active part in such deliberations.

APPLICATION OF THE ALBERTA BUILDING CODE

The full benefits of a uniform building standard will not be realized until there is uniform application and enforcement of the standards for all building construction within the province. Consideration of financial, technical and administrative implications led the Committee to recommend that by Order of the Minister, areas or classes of construction, or both, can be exempted from the application of The Alberta Building Code.

Opinions on this subject varied widely. Should The Alberta Building Code be prescribed as the only building standard that a municipality may adopt or should the adoption and enforcement of the code be mandatory for all municipalities? Neither of these alternatives were considered acceptable.

For certain structures, eg. buildings of public assembly, industrial plants, schools and the like, it was felt that no matter how remote the location, The Alberta Building Code should be enforced. The Alberta Liquor Control Board in its submission stated pointedly that it would be necessary to retain facilities for plan checking and inspection of hotel structures until such time as province-wide enforcement of building standards was instituted.

Should summer cottages or a trapper's cabin be exempted and should farm families or families living in remote regions be denied the control and inspection services considered routine for most urban dwellers?

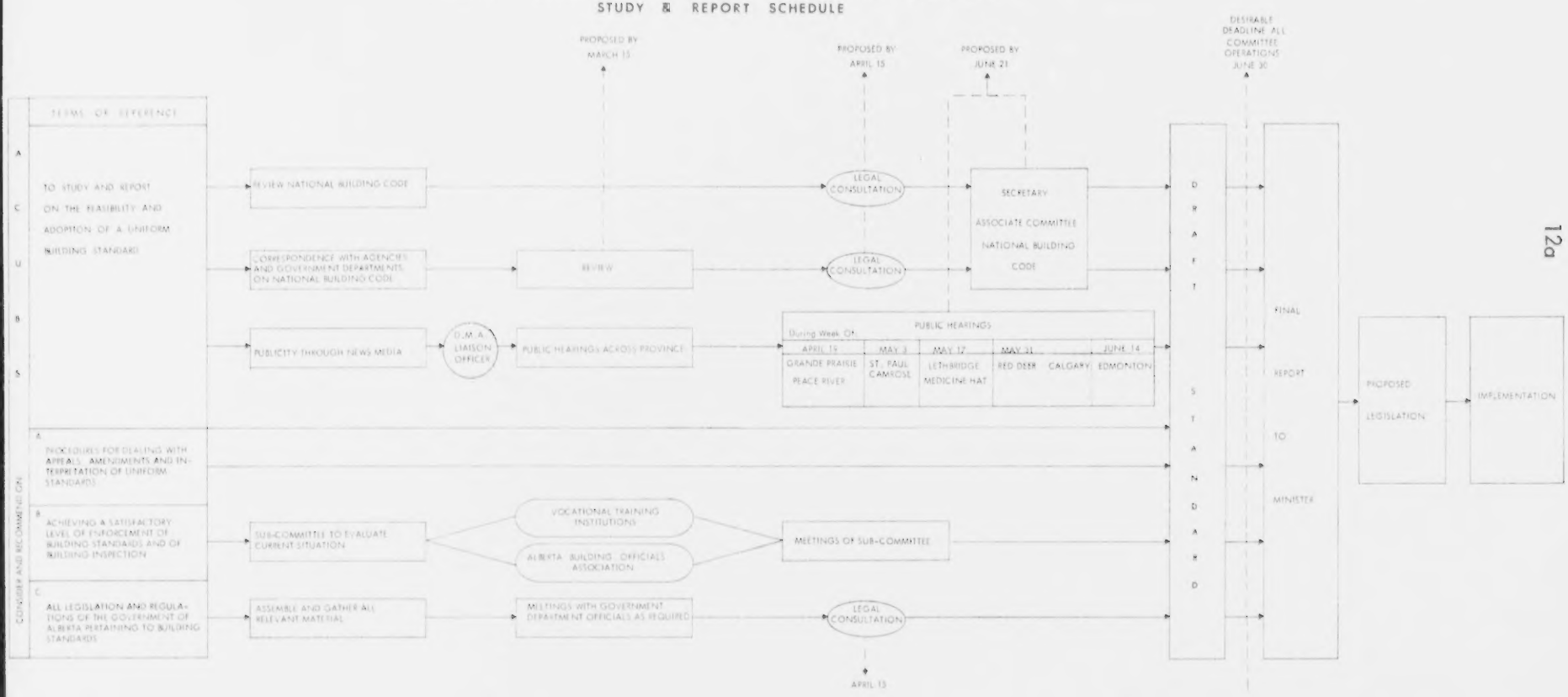
There will have to be flexibility in approaching these problems. It is to be hoped that progressively universal application of The Alberta Building Code will be reached in the interest of the safety and health of all Albertans.

FIRE PROTECTION IN HIGH-RISE BUILDINGS

The Committee found that fire in tall buildings and related fire exit and smoke control provisions were not finalized in the 1970 edition of The National Building Code but rather were subject to continued study with a view to production of an explanatory Supplement No. 3 to the Code containing, among other matters, further detail on methods of smoke control. The smoke control part of this supplement, now just out in draft form, needs reconciliation with new fire protection enactments in North American cities and elsewhere, and with current proposals for more sprinkler protection by the Alberta Fire Chief's Association.

The Committee has therefore requested the Fire Commissioner of Alberta to continue study on this subject and if necessary, to propose amendments as soon as possible to the Associate Committee and appropriate revision committees for The National Building Code for increased fire protection for new high-rise buildings.

ALBERTA COMMITTEE ON UNIFORM BUILDING STANDARDS
STUDY & REPORT SCHEDULE



APPENDIX "C"

NATIONAL BUILDING CODE OF CANADA 1970

by

Robert F. Legget
(Chairman ACNBC 1948-1970)

This Paper outlines the main features of the 1970 (Fifth) Edition of the National Building Code of Canada, just released. Tribute should be paid, at the outset, to the voluntary contributions of the more than 250 Canadians (and this is a very real figure!) who worked on all the technical committees that do the detailed work of revision, under the general policy direction of the Associate Committee. Drafts of every revised Part and Section were made publicly available for criticism and comment. At least 10,000 comments were received on these drafts from all over Canada, and even from the U.S.A. Every comment was individually considered by the appropriate committee and adopted if it was deemed to be an improvement or useful correction. The Associate Committee is a group of twenty-seven leaders in different branches of the building industry of Canada, drawn from coast to coast, who are responsible to the National Research Council for all aspects of the Code and its associated documents. The National Building Code of Canada is, therefore, a truly national document prepared by this national voluntary committee, with staff assistance from the Division of Building Research of NRC.

Use of the Code

The 1970 Code is similar in appearance and in its general arrangements to the 1960 and 1965 Editions. It is drafted in the form of a municipal by-law in appropriate legal language as necessary, so that it can be readily adopted for local official use by the passage of a short enabling by-law by municipal councils. Earlier editions of the Code are now serving in this way as the local building regulations of municipalities in which live well over three quarters of the population of Canada. A number of provincial governments are now considering the mandatory use of the 1970 National Building Code as the building regulation for all their municipalities.

Administration

Differences in climate across Canada are taken care of by a blank table into which can be filled climatic data for each individual municipality, based on information contained in Supplement No. 1 (Climatic Information for Building). This Table appears at the end of Part One, Administration (9)* This part has been much improved since the last edition. It states the purpose of the Code - "To safeguard life or limb, health, property and public welfare with respect to the design, construction and alteration of buildings by the provision of appropriate minimum standards" (3). This part also contains the vital "escape clause", permitting the use of equivalents provided that they "provide the level of performance required by this Bylaw" (7).

It is in this way that provision is made for advances in building technology in advance of the publication of the next Edition of the Code in 1975. The code does not therefore, "limit the appropriate use of materials, equipment or methods of construction not specifically authorized" provided that they meet the essential performance requirements of the Code.

Structural Design

A major change will be found in Part Four, Structural Design. In previous editions, complete design codes for timber, steel, concrete and masonry have been included. These important documents do not appear in the 1970 Code, but are referred to in appropriate short "performance" requirements for such design work (183). The Documents, five of which are CSA Standards but that for masonry was prepared by an NBC Committee, are all being printed in a separate volume together with a reprint of The Design Part of the Code combined with other useful information for structural design previously given in the old Supplement No. 3. This new volume will be Supplement No. 4 to the 1970 code but will probably more commonly come to be known as the Canadian Structural Design Manual. The Associate Committee hopes that this new arrangement of design material will prove to be a real convenience to structural designers throughout Canada.

* Numbers in parenthesis refer to page numbers in the Code

Associated Documents

Parts Five, Six and Seven, although updated and improved, differ but little in essential from the 1965 edition. Part Eight, however, has been greatly reduced in length dealing now only with Construction Safety Measures for the protection of the public at or near construction sites (297). The much longer provisions for protection of workmen on construction sites, developed with the aid of provincial safety authorities from across Canada, will appear in the Canadian Construction Safety Code. This will appear later in the year as a companion document to the Code, in pocket-sized format. A similar pocket-sized booklet will also be published as the Canadain Plumbing Code , containing the Part Seven and additional information useful to plumbing authorities.

Residential Standards

Part Nine now deals with "Housing in Small Buildings" and so fills a gap (with regard to small buildings) in the 1965 Code (305). It is a very detailed set of requirements, over 150 pages in length, for these "non-engineered" but most important structures. It contains the sort of information that previously appeared only in Residential Standards. In the 1965 Edition the attempt was made to provide a real "performance-type code" for residential construction, supplemented by detailed information in the companion volume. As others have found, a "performance-type code" just does not work to the satisfaction of building officials and others charged with authority for the control of buildings. All the detailed information will still appear in Residential Standards (soon to be the Canadian Code for Residential Construction) and also in the most useful pocket-sized Short Form of the 1970 Code. Both these documents will appear later in the year and will probably contain a new set of span tables, based on the new lumber sizes etc., that will probably be in use throughout Canada later this year.

Use and Occupancy

Part Three is the "heart" of the Code dealing, as it does with the use and occupancy of all buildings (other than houses and small buildings) and so containing provisions for Fire Safety in Buildings, Exit Requirements, the provision of proper Service Spaces and Health Requirements (31). It has been thoroughly revised and constitutes a more conveniently arranged and updated document than that contained in the 1965 edition, satisfactory though this proved to be in use. The most significant change, however, is the inclusion of a new subsection containing the first provisions against the danger of fires in tall buildings. This is so important that it is explained in some detail in the following notes.

Fire in Tall Buildings

There are two main problems. Research studies, with the aid of computers, have indicated that normal air flows in a high building in winter time could, following the outbreak of fire, result in early fouling of stair and elevator shafts with smoke and later, widespread contamination. In the second place, and more dramatically, a series of false fire alarms in a tall building in eastern Canada made it apparent that, even in the absence of smoke, the emergency evacuation of a high building poses very serious problems. In these particular cases, the elevators were not used and the whole population of the building attempted to use two stairwells. The resulting overcrowding was so excessive that movement almost completely stopped.

The increasing number of very tall buildings now being built in many Canadian cities makes the matter of such vital importance that a new edition of the Code could not be considered without some attention to appropriate regulations. The Standing Committee on Use and Occupancy therefore appointed a special Task Force to study the problem and report back to it. The entire Standing Committee has given most careful attention to the recommendations of its Task Force and after much consideration has recommended a two-part solution to the Associate Committee.

In the 1970 Edition, there is now included in Part 3 a new Subsection (3.2.6) in which are set out certain essential requirements for buildings more than 12 storeys in height or more than 6 storeys where they contain sleeping accommodation or have a certain population density. Typical is the requirement that there must be a communication system serving every floor from a central control point on the street floor. This communication system will be controlled by the Building Superintendent or Fire Department so that occupants of any floor in a building can be advised promptly what to do in case of fire or other emergency. This new Subsection contains the following special note (98):

> "Experience with high buildings has shown that the time required for complete evacuation can exceed that which is considered necessary for the safe egress of all occupants. Studies of the "chimney effect" and observation of smoke movement in actual fires have shown that present measures for containing a fire on any one storey will not normally prevent the movement of smoke through vertical shafts to the upper floors of a high building. This situation may make the operation of elevators unsafe in a fire emergency. Occupants of high buildings, and particularly those on upper floors, may therefore be faced with severe smoke conditions from fires occuring in storeys below them, before their own evacuation is possible.

> The Associate Committee is aware of this serious problem. It has drafted new provisions for the National Building Code to increase the safety of occupants of high buildings. The Subsection now indicates essential requirements for this purpose. Additional important provisions which relate to the control of smoke movement are issued separately in the form of a special paper since they represent a departure from existing design practice. These additional recommendations for design are, therefore, readily available to the construction industry and may be used on a voluntary basis. The Associate Committee will be considering the incorporation of such provisions into the NBC and will be pleased to receive suggestions for their improvement during 1970."

The special explanatory paper referenced in the above noted has now been issued a red-covered mimeographed document of 97 pages, copies of which may be obtained, free, on application to the Secretary of the Associate Committee. It contains clauses indicating alternative ways of providing for life safety in tall buildings. One of the proposals involves phased instead of immediate evacuation of the occupants of a tall building. The premise here is that only those in the immediate vicinity of a fire would hear a fire alarm so that they would be the only ones expected to move. In general, the occupants of floors remote from the fire would remain in their normal locations for the duration of the fire or until instructed to move by the Fire Department. This approval requires that smoke migrations be limited. Various design techniques to modify air flow patterns in order to reduce smoke movement are being investigated by the NRC Division of Building Research as part of a major research effort. These include injection of air into major shafts and the venting of others, the use of ventilated or pressurized lobbies to elevators and stair-shaft, and total building pressurization with venting of the fire floor. The Associate Committee naturally greatly appreciates the availability of this expert advice from DBR/NRC, proof yet again of the advantage of having an active building research organization closely allied but quite separate from the work of preparing the Code.

It is therefore hoped that all Canadians who are concerned with safety in high buildings, and all experienced in modern fire fighting, will give the most careful study to the Explanatory Paper and favour the Associate Committee with their most critical and constructive comments as soon as possible. It should be explained that, necessarily, it is a highly technical document and so will be of interest and of use only to those who can give detailed study to the "tall building problem". All comments received on the proposed draft clauses (and on the Explanatory Paper) will be carefully considered later in the year by an appropriate technical group for the Associate Committee which will, eventually, give most serious consideration to the conclusions that are thus reached for the further improvement of Subsection 3.2.6., and any other parts of Part 3 that may be called into question. When final decisions have

been made by the Associate Committee, on the basis of this national concensus, a special revision pamphlet will be issued, probably in the first half of 1971.

Conclusion

One general new feature of the 1970 Code is that, to the extent that been possible, and with the exception of Part Nine, metric equivalents have been included (in parenthesis) with all foot-pound dimensions. The Associate Committee had decided upon introducing this convenience, following the lead of the American Society for Testing and Materials, in the conviction that Canada would one day become a metric country. During the final stages of preparing the Fifth Edition, the Government of Canada issued its Whipe Paper on Metric Conversion (dated 16 January 1970) in which it is stated that the Government proposed two actions "in order to initiate the process of metric conversion in Canada". This confirmed the decision of the Associate Committee in a remarkable way; every effort will be made to include metric equivalents in associated documents as soon as possible.

As always the Code, the Supplements and all the associated documents are being translated into French. This difficult task could not be started until all final drafts were available and so it can not be completed until later in the year. It is confidently hoped, however, that all the documents necessary to make the Code service complete will be available in both languages of Canada by about the end of the year, if not before.

Finally, it is a matter of satisfaction to the Associate Committee to have the "Commendation of the 1970 Code for use as a Building Bylaw throughout Canada" given by no less than seventeen important national organizations - of engineers, architects, contractors, house builders, urban developers, fire insurance authorities, fire prevention and fire fighting organizations, mayors and municipalities, the Canadian Chamber of Commerce, the Canadian Labour Congress and the Canadian Building Officials Association. No one group within the complex building industry of Canada has contributed more to the development of the 1970 Code in its technical aspects than the building officials of Canada. It is the wish and the hope of the Associate Committee that the widespread use of the 1970 edition of the National Building Code will still further assist with the vitally important work of these devoted public servants in the interests of public safety.

APPENDIX "D"

ALBERTA
MUNICIPAL AFFAIRS BUILDING
10363 - 108th STREET

A. W. MORRISON
DEPUTY MINISTER

EDMONTON, ALBERTA
January 5, 1970.

SENT TO ALL MUNICIPALITIES

Dear Sir/Madam:

Problems associated with the multiplicity of municipal building standards have been discussed at several Federal-Provincial conferences over the past few years. It is claimed, for example, that variations in basic municipal building standards particularly in the more populated parts of Canada have contributed to increases in construction costs.

Although the situation here in Alberta is not so critical, there would be obvious advantages in attempting to achieve more uniform building standards. For this reason this Department has been recommending to municipalities the adoption of the National Building Code of Canada.

In order to fully assess the Alberta situation and the practicality of striving to achieve uniformity in building standards, the enclosed questionnaire has been prepared for distribution to all municipalities. Your co-operation in completing the questionnaire will be appreciated.

Yours truly,

DEPUTY MINISTER

DEPARTMENT OF MUNICIPAL AFFAIRS

BUILDING STANDARDS QUESTIONNAIRE

Please return one copy of completed questionnaire to: -
Planning Branch,
Department of Municipal Affairs,
10363 - 108 Street, Edmonton, Alberta.

		Yes	No
1.	Do you have a bylaw regulating building construction?	____	____
2.	Has the bylaw been passed pursuant to the provisions of The Municipal Government Act (or former municipal acts) OR are building standards adopted by provisions of a zoning or development control bylaw passed pursuant to The Planning Act?	____	____
3.	Does the bylaw adopt the National Building Code of Canada?	____	____
	OR the Shorter Form of the National Building Code?	____	____
	(a) if so, what edition?	_____ (year)	
	(b) is the N.B.C. adopted in its entirety?	____	____
	(c) is the N.B.C. adopted with amendments?	____	____
	(d) Please estimate what percentage of the N.B.C. is in effect and what percentage is amended.	____ %in effect ____ % amended	
4.	To what degree are the building regulations being enforced.		
	(a) are permits issued?	____	____
	(b) are plans checked for conformity with the standards?	____	____

	Yes	No
(c) Do you have building inspection service?	____	____
(i) complete inspection service?	____	____
(ii) partial inspection service?	____	____
(d) are final certificates of occupancy or certificates of compliance with regulations issued on completion of construction?	____	____
(e) is there a municipal official appointed to administer the building bylaw? please specify _____		

5. Would it be desirable to your administration to have available a service which could provide assistance to municipalities in:

(a) plan checking?	____	____
(b) building inspection?	____	____
(c) code interpretation?	____	____

6. Do you regulate by bylaw

(a) plumbing and gas installations?	____	____
(b) heating and ventilation installations?	____	____
(c) electrical installations?	____	____

APPENDIX "D"

MEMORANDUM

DEPARTMENT OF MUNICIPAL AFFAIRS

OUR FILE NO.:

FROM:

YOUR FILE NO.:

TO:

DATE: June 8, 1970.

Report on
Alberta Building Standards

The recent substantial completion of the Alberta Survey on Building Standards will now permit a brief review of facts.

Building Standard Questionnaires on a variety of specific subjects were circularized among all municipalities in the Province to determine the degree of implementation and control over these matters.

Within three months a 90 to 100% response to these questionnaires was received. A host of information was summarized in a four table analysis similar to the Ontario Government pattern.

Fundamentally the analysis is broken down as follows:

Table I - Report on the Use of the National Building Code by Alberta Municipalities

Table II - Report on the Use of a Building Bylaw per se with or without the National Building Code

Table III - Report on the technical enforcement of Building Regulations

Table IV - Report on the demand for training of municipal appointee e.g. Building Inspector, etc., for specific administrative duties

. . . 2

The following principal facts are extracted for your convenience from 309 replies received out of a possible 326:

As to Table I

- 9 out of 10 cities use the National Building Code (total population 962,078)
- 71 out of 97 towns use the National Building Code (total population 164,516)
- 27 out of 127 villages use the National Building Code (total population 13,002)
- 4 out of 27 Summer Villages use the National Building Code (total population 213)
- 10 out of 30 Counties use the National Building Code (total population 99,538)
- 3 out of 18 M.D.'s use the National Building Code (total population 30,903)

Summary:

- 124 municipalities, covering a population of 1,270,250 use the long or short form of the National Building Code not necessarily of the latest edition.

As to Table II

- 192 municipalities, covering a population of 1,330,766 maintain a Building bylaw of a kind with or without the benefit of National Building Code provisions.
  Note: Table I summary is incorporated here.
- There are 117 municipalities in the Province that do not maintain a Building Bylaw at all. The population coverage is 185,268.

. . . 3

As to Table III

- 218 Municipalities issue Building Permits
- 143 Municipalities check for conformity with Building Standards on new construction
- 16 Municipalities issue final certificates on completion of construction
- 136 Municipalities have municipal appointee to administer their Building Bylaw

As to Table IV - The following breakdown is established on the desirability of technical training for municipal appointee:

	In favor	Indifferent or opposed
Plan Checking	114 Mun.	90 Mun.
Building Inspection	126 Mun.	88 Mun.
Code Interpretation	128 Mun.	82 Mun.

A. J. Kerstens

AJK/rld

SUMMARY TABLE
on the
ANALYSIS OF BUILDING STANDARD QUESTIONNAIRES

A total of 309 replies to the Alberta Building Standard Questionnaire were received from all urban and rural municipalities throughout the Province.

Out of these:

- 124 use the Long or Short Form of the National Building Code. Population coverage is 1,270.250
- 192 maintain a Building Bylaw of a kind (this includes N.B.C. users) Population coverage is 1,330.776
- 117 do not have a Building Bylaw at all. Population coverage is 185.268
- 218 issue Building Permits
- 143 check conformity with Building Standards
- 16 issue Final Certificates on completion of construction
- 136 have an official appointee to administer their local Building Bylaw
- 150 regulate standards of Utility Installations by Bylaw
- 143 use Provincial standards and inspection services for their Utility Installations
- 114 would prefer to have available a service for assistance in Plan Checking
- 90 do not - dto -
- 126 would prefer to have available a service for assistance in Building Inspection
- 88 do not - dto -
- 128 would prefer to have available a service for assistance in Code Interpretation
- 82 do not - dto -
- 17 did not respond to questionnaire within 90 days

PROVINCE OF ALBERTA - SPRING 1970

TABLE 1 - ANALYSIS OF BUILDING STANDARDS QUESTIONNAIRE ON USE OF N.B.C.

	No. of Mun. that answered questionnaire - percent of total	Mun. that use NBC: No.	Mun. that use NBC: Pop. covered	No. of Mun. using: Long Form	No. of Mun. using: Short Form	Year of* Edition	No. of Mun.* that use NBC in its entirety	No. of Mun.* that adopted NBC with amendments	Percentage* of NBC in effect	Percentage* of NBC amended	No. of Mun. that do not use NBC
CITIES	10-100%	9	962,078	8	1	1-1962 8-1965	3	7	1-100% 1-60% 1-95% 2-90% 1-85% 1-80%	1-40% 1-20% 1-15% 2-10% 1-5%	1
TOWNS	97-94%	71	164,616	32	39	2-1953 1-1962 4-1963 9-1960 27-1965	32	20	15-100% 1-99% 3-95% 3-90% 2-80% 1-75% 1-70% 1-50% 1-40%	1-50% 1-30% 1-25% 1-20% 2-10% 3-5% 1-1%	26
VILLAGES	127-92%	27	13,002	11	16	6-1960 1-1963 7-1965	11	5	4-100% 1-70% 2-50%	1-50% 1-30%	102

TABLE 1 - Continued

	No. of Mun. that answered questionnaire - percent of total	Mun. that use NBC: No.	Mun. that use NBC: Pop. covered	No. of Mun. using: Long Form	No. of Mun. using: Short Form	Year of* Edition	No. of Mun.* that use NBC in its entirety	No. of Mun.* that adopted NBC with amendments	Percentage* of NBC in effect	Percentage* of NBC amended	No. of Mun. that do not use NBC
SUMMER VILLAGES	27-90%	4	213	3	1	1-1965	Nil	2	1-50% 1-50/60 1-80%	2-100% 1-20%	23
COUNTIES	30-100%	10	99,538	3	7	7-1965 1-1969	4	2	2-100% 2-90% 1-80%	1-20% 1-10%	20
MUNICIPAL DISTRICTS	18-100%	3	30,903	1	2	1-1955 2-1960	1	1	2-100%	Nil	15

* Alberta information above and beyond Ontario requirement.

PROVINCE OF ALBERTA - SPRING 1970

TABLE II - ANALYSIS OF MUNICIPALITIES BY BUILDING BY-LAWS

	No. of Mun. that answered questionnaire - percent of total	No. of Mun. that have a Building By-law incl. NBC	Population covered by Building By-laws	By-law passed* pursuant to		No. of Mun. that do not have a Building By-law	Pop. not covered by Building By-laws
				Mun. Govt. Act	Planning Act		
CITIES	10-100%	10	974,132	4 both Acts - 2 neither Act - 1	3	Nil	Nil
TOWNS	97-96%	87	183,348	34 both Acts - 10	55	10	7,730
VILLAGES	127-92%	62	24,927	28	34	65	17,396
SUMMER VILLAGES	27-90%	17	282	4	13	10	171
COUNTIES	30-100%	12	112,915	2	9	18	100,706
MUNICIPAL DISTRICTS	18-100%	4	35,162	2	2	14	59,265

* Alberta information above and beyond Ontario requirement

PROVINCE OF ALBERTA - SPRING 1970

TABLE III - ANALYSIS OF BUILDING STANDARDS QUESTIONNAIRE ON BUILDING REGULATION ENFORCEMENT *

	No. of Mun. that answered questionnaire - percent of total	No. of Mun. that issue Permits	No. of Mun. that check for conformity with standards	No. of Mun. that have Bldg. Insp. Serv.	No. of Mun. that have Bldg. Insp. Serv. complete	No. of Mun. that have Bldg. Insp. Serv. partial	No. of Mun. that issue final Certificates on completion of construction	No. of Mun. that have Bldg. Inspector etc. administering Bldg. By-law	No. of Mun. that: A - have installations regulated by By-law B - are using Provincial Standards and Insp. Serv. Plumbing & Gas	Heating & Vent.	Electrical
CITIES	10-100%	10	10	10	8	2	3 on request - 1	9	A 9 B 1	7	7 1
TOWNS	97-96%	91	69	66	25	46	2	73	A 35 B 23	15 19	8 25
VILLAGES	127-92%	79	36	22	5	27	4	31	A 31 B 17	12 13	11 18
SUMMER VILLAGES	27-90%	19	17	8	3	9	2	12	A 6 B 5	3 5	4 4

TABLE III - Continued

	No. of Mun. that answered questionnaire - percent of total	No. of Mun. that issue Permits	No. of Mun. that check for conformity with standards	No. of Mun. that have Bldg. Insp. Serv.	No. of Mun. that have complete	No. of Mun. that have partial	No. of Mun. that issue final Certificates on completion of construction	No. of Mun. that have Bldg. Inspector etc. administering Bldg. By-law	No. of Mun. that: A - have installations regulated by By-law B - are using Provincial Standards and Insp. Serv. Plumbing & Gas	Heating & Vent.	Electrical
COUNTIES	30-100%	13	8	8	4	6	3	7	A 1 B 4	4	1 4
MUNICIPAL DISTRICTS	18-100%	6	3	3	2	1	1	4	A Nil B	Nil	Nil
TOTAL		218	143	117	47	91	16	136	A 82 B 50	37 41	31 = 150 52 = 143

* Alberta information above and beyond Ontario requirement - all of Table III.

PROVINCE OF ALBERTA - SPRING 1970

TABLE IV - ANALYSIS OF BUILDING STANDARDS QUESTIONNAIRE ON THE DEMAND FOR TRAINING OF MUNICIPAL APPOINTEE (Bldg. Inspector etc.)

Is a Training Course* Desirable for the Following Skills:

	No. of Mun. that answered questionnaire - percent of total	Plan Checking		Building Inspection		Code Interpretation	
		YES	NO	YES	NO	YES	NO
CITIES	10-100%	5 cond. - 1	3	2 cond.-1	6	8 cond.-1	1
TOWNS	97-96%	48	19	51	18	57	13
VILLAGES	127-92%	42	39	52	37	44	39
SUMMER VILLAGES	27-90%	5	12	7	11	5	12
COUNTIES	30%-100%	10	9	9	9	10	8
MUNICIPAL DISTRICTS	18-100%	3	8	4	7	3	9
TOTAL		114	90	126	88	128	82

* Alberta Information above and beyond Ontario requirement.

NOTE: The Province of Ontario generalizes "Training Course" without giving specifications.

APPENDIX "E"

Ref. No.	Nature of Submission	Recommended Course of Action
1.	Mr. J. E. Cocks, Calgary	
	(a) Each municipality to write its own Administration Part I of Code.	(a) Further study required to determine whether an enforceable document can be devised which would be acceptable to all municipalities in the Province.
	(b) A sprinkler system to be made mandatory in any building over six storeys. Review subsection 3.2.6	(b) Matter under review.
	(c) That National Research Council Associate Committee Supplements #'s 1,2,3,4, & 5 be made a part of the Building Code.	(c) In connection with fire safety in tall buildings adopt Supplements #'s 1,2, and 4 as part of Alberta Code, i.e. climatic information for bldg. design, - fire performance ratings, - Canadian Structural Design Manual.
2.	R. N. Briggs, P. Eng., Head, Municipal Engineering Section Department of Health	
	That new national guidelines for the design of swimming pools be adopted rather than accepting specifications for sanitary fixtures as shown in Table 3.6.4.2. of National Building Code	Accept National Building Code provisions Incoming Committee to refer to Nation Research Council

Ref. No.	Nature of Submission	Recommended Course of Action
3.	Mr. H. H. Sommerville, Deputy Minister Department of Mines & Minerals	
	Raises question of maximum distance for the location of buildings relative to pipelines.	Refer to Incoming Committee for study.
4.	Mr. D. M. Dymond Manager of Planning & Development Canadian Standards Association	
	Suggests that consideration be given to the inclusion of additional requirements related to the adoption of C.S.A. Z-240 Standards if the National Building Code becomes the provincial code.	Do not integrate Z-240 (Mobile Home) Standards with National Building Code until industry has adopted full range of standards.
5.	Mr. H. R. Buhrke, Vice-President Instant Housing Industries Ltd. Calgary	
	Provides comparison between C.S.A. Z-240 Standards with provisions under the National Building Code.	Same as Ref. No. 4
6.	Mr. L. E. Semrau, Secretary-Treasurer Calgary Home Builders Association	
	Supports the adoption of The National Building Code in its entirety.	Information

Ref. No.	Nature of Submission	Recommended Course of Action
7.	Mr. W. E. Sutton Chief Elevator Inspector Department of Labour	
	National Building Code lacks provision with respect to hoistway ventilation and use of elevators in time of emergency. Cities of Edmonton and Calgary enforce requirements through separate bylaws.	Refer to Incoming Committee.
8.	Mr. A. J. Rees, Chief Inspector Boiler's Branch, Department of Labour	
	Refers to requirements under the ASME Boiler & Pressure Vessel Code outlining the scope of their operations.	Refer to Incoming Committee.
9.	Mr. M. J. Griffith, Secretary, Master Sheet Metal Contractor's Association, Edmonton	
	That the City of Edmonton Heating and Ventilating Code be adopted as a provincial code.	Not recommended - National Building Code provisions should be upheld if possible. NOTE: City of Edmonton is preparing a new draft of their own Heating and Ventilating Code.
10.	Mr. J. Graham, Chief, Fire Department City of Edmonton	
	(a) That windowless basements of an area over 1,500 sq. ft. be sprinklered except for 1 and 2 family dwellings - reference National Building Code Section 3.2.2.11 to 3.2.2.51	Refer to Incoming Committee.

Ref. No.	Nature of Submission	Recommended Course of Action
10.	(b) That windowless construction of walls over a certain height not be permitted - reference National Building Code Section 3.2.5.1 (1)	Refer to Incoming Committee.
	(c) That National Building Code Table 3.2.5.A regarding standpipe requirements be followed - regardless of positioning of fire separation walls.	
11.	Mr. G. Hodge, City Engineer City of Edmonton	
	(a) That local authorities be permitted to amend portions of National Building Code which deal with the control of vehicular traffic to suit their particular need - reference National Building Code Section 8.2.5.	It was agreed that the matters referred to should be left to local prerogative. Refer to Incoming Committee.
	(b) That local traffic bylaws take precedence to any National Building Code provisions.	
	(c) That local street bylaws take precedence to any National Building Code provisions involving the provincial use or occupation of public property. Section 4.28, 8.2.1 and 8.2.4.	
12.	Mr. R. C. MacPherson Director of Licensing Alberta Liquor Control Board	
	A considerable variation exists in Liquor Board requirements versus National Building Code Table 3.6.4. A relative to the number of toilet installations in relation to seating capacities for licensed premises.	Code changes not recommended.

Ref. No.	Nature of Submission	Recommended Course of Action
13.	Mr. A. D. Elliott, Chairman Alberta Liquor Control Board	
	As above.	Code changes not recommended.
14.	The Alberta Association of Architects	
	Recognizes and supports the need for a uniform building code for the province based on the National Building Code.	Information.
15.	Mr. R. S. Winter and Plumbing Advisory Board	
	That a sub-committee be established to deal with Part 7 (Plumbing services) of The National Building Code.	Sub-committee established. Rewrite of Plumbing and Drainage Regulation completed. Refer to Incoming Committee for Inclusion in Alberta Building Code.
16.	Mr. W. L. Lindberg, Summit Engineering Sales, Edmonton, Ltd.	
	Refers to a wide range of National Building Code requirements with proposals hereto.	Refer to Incoming Committee for detailed study.
17.	Mr. D. M. Murray, Sales and Industrial Development, Northwestern Utilities Ltd. Edmonton	
	Supports National Building Code Section 6.2 relative to heating, ventilating, and air conditioning Systems and Equipment.	Sub-Committee established finalized report to be referred to Incoming Committee.

Ref. No.	Nature of Submission	Recommended Course of Action
17.	Believes National Building Code Section 3.5.2. would eliminate the use of air door applications and infra-red heaters at doorways. Requests that National Building Code Section 6.3. permit flue fed incinerators under N.F.P.A. 82.	Sub-committee established finalized report to be referred to Incoming Committee.
18.	Mr. R. Hebert, Codes Engineer, Canadian Steel Industries, Construction Council, Toronto, Ontario Comments on uniform building standards and their enforcement, training of building inspectors; also makes reference to municipal legislation.	Information.
19.	Alberta Provincial Fire Chiefs Association Suggest several changes to National Building Code and provide comments regarding fire safety in high rise buildings.	Under continuing review for Incoming Committee.
20.	Mayor's Pollution Study Committee, Calgary Reports on sound transmission in multiple dwellings with special reference to functional tests.	Refer to Incoming Committee.

Ref. No.	Nature of Submission	Recommended Course of Action
21.	Mr. R. Kern, Canadian Fire Hose Corp. Ltd., c/o Ritchie Kern Sales Ltd., Edmonton	
	Refers to National Building Code Sections 6.7.3.2.(6), (8) and Section 6.7.3.3.(5) regarding reducing valves, continuous flow hose reels and locking devices on doors to hose cabinets. Reference is also made to Section 6.7.3.5.(6) on wording.	Recommend referral to National Research Council.
22.	Mr. C. W. McNicoll, Staff Inspector Police Department, City of Edmonton	
	That exit doors of business establishments be fitted with a device that must be opened from the inside as a security and crime prevention measure.	Refer to Incoming Committee.
23.	Mr. F. E. Whittle, Director Apprenticeship Board & Tradesmen's Qualification, Province of Alberta	
	Refers to current Alberta Plumbing and Drainage Regulation with the view to eliminate multiplicity of codes.	Referred to plumbing sub-committee.
24.	Mrs. Edna Laforge, Alberta Rehabilitation Council for the Disabled.	
	Urges the adoption of National Research Council Supplement #5 "Building Standards for the Handicapped" with special reference to residential buildings.	That the provisions of Supplement #5 be applied to Provincial Public Buildings whenever practical. The Incoming Committee should consider means of encouraging the broader application of the provisions of Supplement #5.

Ref. No.	Nature of Submission	Recommended Course of Action
25.	Mr. C. L. Usher, Deputy Minister of Youth	
	That National Research Council Supplement No. 5: Bldg. Standards for the Handicapped, be incorporated into the Alberta Code.	As above.
26.	Mr. C. D. Howarth, City Engineer Engineering Department, City of Calgary	
	Refers to National Building Code sections relating to municipal services such as streets, water, sewage, etc.	Deemed to be matters of local prerogative.
27.	Mr. A. C. Gibbard, General Staff Engineer Planning, Alberta Government Telephones	
	That a general statement within the code require the inclusion of telephone service provisions in the building design.	Considered a building design element. Refer to Incoming Committee.
	or	
	That detailed specifications be incorporated into the code by adding a new Section 6.8 (Telephone Services) to Part 6 - Building Services.	
28.	Mr. W. W. Butchart Consulting Architect to the Edmonton Public School Board	
	Favours the acceptance of The National Building Code but desires more freedom and flexibility specifically in School design.	Information.

Ref. No.	Nature of Submission	Recommended Course of Action
29.	Mr. C. E. Hornady Canadian Institute of Public Health Inspectors, Alberta Branch	
	Suggests minimum floor area for sleeping rooms. Feels that design temperatures are inadequate in The National Building Code. It will not serve certain local conditions properly.	No action recommended at this time. NOTE: City of Edmonton is preparing a new draft of their own Heating & Ventilating Code.
30.	Mr. R. C. Delameter Summer Village of Grandview	
	Recommends that recreational dwellings should not be governed by provisions of National Building Code.	Not considered practical to have recreational dwellings meet requirements of the National Building Code although future consideration is necessary due to gradual change from seasonal to permanent occupancy.
31.	Mr. Harold W. Eckhardt Marketing Manager Kraus Carpet Mills Ltd., Kitchener, Ont.	
	Claims National Building Code tunnel test to measure flame spread of building materials is inappropriate for testing flammable characteristics of rugs and carpets and should not be made mandatory. Recommend adoption of the smoke development and methanamine pill test instead.	No action required. This matter is currently under intensive study by the National Research Council.

Ref. No.	Nature of Submission	Recommended Course of Action
32.	Mr. H. Collins, Director Building Inspection Branch, City of Edmonton	
	Makes reference to safety in high-rise buildings.	Under continuing review by the Provincial Fire Commissioner.
33.	Mr. E. N. Hill, Supervisor Heating & Ventilating, City of Edmonton	
	Refers to National Building Code sections governing the field of heating and ventilating. Still under active study.	Propose referral to Incoming Committee on completion of report.
34.	Mr. D. Garritt, President, Alberta Association of Plumbing, Gas and Heating Inspections	
	Refers to matters concerning Plumbing, Gas and Heating Provisions.	Referred to Plumbing sub-committee.
35.	Mr. D. I. Istvanffy, Director, Alberta Bureau of Statistics	
	Stresses the need for uniformity of building values across the province for permit purposes and statistics comparability.	Methods for standardizing reporting on building values for statistical purposes should be further investigated by the Incoming Committee.
36.	Mr. R. Etherington Calgary Building Inspector	
	This submission stresses the adoption of The National Building Code without any changes.	Information.

Ref. No.	Nature of Submission	Recommended Course of Action
37.	Alberta Housing Council of the National House Builders Association	
	Refers to general administration and application of the code upon its adoption.	Information.
38.	Calgary Home Builders Association	
	Urges the adoption of The National Building Code without alteration, adoption, deletion or other changes.	Information.
39.	Mr. J. R. Dickieson, Building Inspector City of Calgary	
	Favours the introduction of minimum ceiling heights for all occupancies.	Recommend that Incoming Committee refer this matter to the National Research Council.
40.	Mr. P. Epp, Jr., Chairman, Urban Development Institute (Alberta Division), Calgary	
	General administrative recommendations.	Information.
41.	Alberta Construction Association	
	Supports the adoption and implementation of The National Building Code. Makes general administrative recommendations.	Information.
42.	Mr. T. Kanashiro, Building Inspector City of Lethbridge	
	Makes administrative recommendation upon code adoption. Reference also	

Ref. No.	Nature of Submission	Recommended Course of Action
42.	being made regarding the Architects Act and Engineering - and Related Professions Act.	Refer to Incoming Committee.
43.	Mr. W. A. Hiller, Director, Campus Development Office, University of Alberta	
	Accepts National Building Code provisions for their purposes.	That University development comply with code provisions.
44.	Mr. J. R. D. Jones, Capital Planning Officer, Universities Commission	
	Operates under Universities Act with a great deal of autonomy. Recommends adoption of National Building Code as the exclusive code for all municipal, provincial and federal jurisdictions. Recognizes the need for a strong provincial central authority for administering the code with an appeals board that is representative of those affected by the Uniform Building Standards, including the Universities.	Information.
45.	Mr. N. H. Whiston, Division Manager, Urban Affairs Division, Edmonton Chamber of Commerce	
	A submission of administrative and preliminary nature.	Information.
46.	Mr. H. C. Martin, Supervisor of Mechanical Inspection, City of Calgary	
	This submission deals exclusively with plumbing services.	Referred to plumbing sub-committee.

Ref. No.	Nature of Submission	Recommended Course of Action
47.	Mr. J. A. Cunliffe, Division Manager North West Brick and Tile	
	Refers to administrative matters upon adoption of code.	Information.
48.	Mr. E. G. Hrdlicka, Vinto Engineering Ltd., Edmonton	
	Reference is made to several parts of the National Building Code.	Referred to Plumbing sub-committee.
49.	Mr. R. M. Scrimgeour, Secretary Electrical Contractors Association of Alberta	
	Prefers to see all rules pertaining to wiring installations to be contained within one document. The National Building Code, however, calls for reference to the Canadian Electrical Code and at the same token includes certain other installation requirements which are not now contained in the Electrical Code.	Refer to Incoming Committee.
50.	Mr. G. W. Lawson, Chief Electrical Inspector, Department of Labour	
	Keepspecialelectrical requirements separate in "The Canadian Electrical Code" rather than including it in The National Building Code.	Refer to Incoming Committee.

APPENDIX "F"

INTERVIEWS

Name of Official	Representing Department or Government Agency	Subject Matter
Mr. D. I. Gardner Deputy Minister	Dept. of Labour	Building officials Inspectorate. - Requiring province to have a "voice" on the national scale to blend in provincial needs relative to the National Building Code
Mr. F.E. Whittle Administrat. Director	Dept. of Labour	
Mr. G.W. Lawson Chief Electric. Insp.	Dept. of Labour	
Mr. P. Elliott, Chairman	Alberta Liquor Control Board	Effects of National Building Code on construction requirements and safety.
Mr. D. Williams	Alberta Liquor Control Board	
Mr. R.N. Briggs Municipal Engineer	Dept. of Environment	Swimming pool and standards of related facilities.
Mr. P. Ullman	Dept. of Environment	Incinerator control and related air pollution.
Mr. D.S. Walker Chief Safety Super.	Workmen's Comp. Board	Safety of workmen on construction sites.
Mr. J.L. Reid Engr. Branch Head	Dept. of Agriculture	Farm building construction inspection services.
Mr. W. Glenn	Dept. of Agriculture	
Mr. J. R. McFall Secretary	Unifarm	Loans through Farm Credit Corporation.
Mr. H. Entrup Member Services Director	Unifarm	

Name of Official	Representing Department of Government Agency	Subject Matter
Mr. A.R. Grover Field Service Branch	Dept. of Municipal Affairs	Code enforcement in remote areas.
Mr. W.A. Hiller Director	Campus Development Office - U. of A.	Compliance of campus development with National Building Code provisions.
Mr. D.I. Istvanffy Director	Alberta Bureau of Statistics	Uniformity of building permit values for statistics comparability.

APPENDIX "G"

GOVERNMENT OF THE PROVINCE OF ALBERTA

Department of the Attorney General

Madison Building,
9917 - 105th Street,
Edmonton, Alberta,
March 3rd, 1972.

Alberta Committee on Uniform
Building Standards,
Department of Municipal Affairs,
8th Floor, 9912 - 107th Street,
EDMONTON 14, Alberta.

ATTENTION: Mr. J. N. Polonuk, Chairman.

Dear Sirs:

Within the confines of time that I have been allotted by my Department to assist you on your project, I have investigated the Alberta Legislation and relevant regulations to ascertain which statutes and regulations deal with matters within the confines of an adopted standard building code for the Province of Alberta.

The adoption of such a standard building code could be done under a new Act with the modification or repeal of certain portions of the Municipal Government Act; or alternatively, by merely amending section 239 of that Act to allow for a provincial code instead of the existing system of municipal building bylaws. Regardless of the method of adoption, the relevant terms of the Municipal Government Act would be affected.

I find that there are many existing Alberta statutes and regulations that either conflict with the proposed building code or duplicate certain of its sections without necessarily conflicting; other Acts of general application should perhaps make reference to the proposed standard code or perhaps the terms of the code will not be binding with relation to those Acts. Attached is a list of the Acts in the order by which they appear in the Revised Statutes of Alberta, 1970, as amended; relevant regulations that have been located are referred to adjacent to

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ATTENTION: J. N. Polonuk

March 3rd, 1972

each statute. While some statutes presently appear to have no existing regulations pertaining to building standards, it may be in some cases that the legislation makes broad provision for future regulations which could encompass that area. If such is the case, however, the writer will attempt to note this adjacent to any appropriate Act mentioned.

In view of the limited time which the writer has been allowed to allot to this investigation pending all other duties in hand, the writer is not in a position to make any final certification that this list should be taken as completely comprehensive. To the writer's best knowledge and belief, however, the list contains the legislation and regulations of concern to your Committee but is always subject to further review and scrutiny by the Legislative Counsel if and when he is instructed to create the necessary Legislative changes for adoption of an Alberta Standard Building Code.

Yours very truly,

D. W. Axler,
Solicitor.

DWA/sm
Att'd.

REVISED STATUTES OF ALBERTA, 1970, AS AMENDED

VOLUME 1

The Amusements Act, Chapter 18, and Regulations;

The Animal Protection Act, Chapter 19:
- sec. 11 (f) (i) - enables possible regulations on standards of design, construction and maintenance of facilities in which animals are kept. Reg. 274/67.

The Architects Act, Chapter 22:
- sec. 21 etc. -- approval of plans.

The Boilers and Pressure Vessels Act, Chapter 32, and Regulations.

The Civil Defence and Disaster Act, Chapter 48:
- fire hose coupling and fitting standards see Reg. 239/58

The Cancer Treatment and Prevention Act, Chapter 38:
- sec. 6 - establishment of cancer hospitals;
- sec. 17 - regulations as necessary for the purposes of the Act.

-- no apparent building standards exist at the present time.

The Cemeteries Act, Chapter 39:
- sec. 8 - standards of chapel and vault;
- sec. 24 - crematories, plan and site approved by Minister in writing; and sec. 25;
- sec. 60 - provides that regulations can include construction and removal, mausolea, tombs, vaults, monuments, gravestones, fences, etc.
- see Regulations 94/64; 95/64; 279/68; 275/60.

The Coal Mines Regulation Act, Chapter 52, Part 8.
- sec. 132 - buildings at mine;
- sec. 135 - directors approval for washhouses, i.e. material, size, light drainage, 2 exits, 8' sq. per person;
- sec. 158 - manhole or place of refuge;
- sec. 141 - underground stables;
- sec. 212 - housing locomotive; approved by district and electrical inspectors;

- sec. 232 - magazine construction;
- sec. 233 - building for explosives, ventilation - Part 12;
- sec. 404 - provides for regulations regarding governing use of electricity at mines, safety conditions;
  Regulation 427 -- Electrical Regulations re: magazine, etc.

The Agricultural and Vocational Colleges Act, Chapter 9.

The Colleges Act, Chapter 56:

- sec. 29 - provides for Lieutenant-Governor-in-Council may issue regulations necessary re any matters that arise and for which no provision is made in this or any other Act;
- sec. 24 - Commission approves or disapproves requests of college boards re expenditures for new buildings - major alterations or additions - Part 4 - re Private Junior Colleges;
- sec. 27 - Plans for buildings, additions, etc. to be submitted to Minister in such detail as he may require.

-- no apparent building standards exist at the present time.

The Corrections Act, Chapter 70:

- Part 2, 8(1) - The Lieutenant-Governor-in-Council may establish or discontinue correctional institutions, etc.

-- no apparent building standards exist at the present time.

REVISED STATUTES OF ALBERTA

VOLUME 2

The Dairymens Act, Chapter 83:

- sec. 48 (d) - provides for regulations re construction of plants.
  see Reg. 250/64; 334/65.

The Department of Labour Act, Chapter 99 - see sec. 8.
Alberta Plumbing and Drainage Regulations.

The Department of Public Works Act, Chapter 105:

- sec. 5 - charge of construction repair, etc. of all property held by Public Works;
- sec. 11 - swimming pools by agreement with municipalities (costs shared);

-- no apparent building standards exist at the present time.

The Electrical Protection Act, Chapter 120 - and Regulations.

The Elevator and Fixed Conveyances Act, Chapter 121.

The Environment Conservation Act, Chapter 125:
- no regulations at end of 1970 - no apparent control by standards of furnace construction, etc. that I can see here. Possible in future under sec. 3 and regulations.

The Fire Prevention Act, Chapter 144, and Regulations.

The Fish Marketing Act, Chapter 145.
- sec. 41 - provides that regulations may be made for storage of fish, etc.

-- can find no building standards set out.

The Frozen Food Act, Chapter 150:
- sec. 10 - set standards for "aisles", toilet facilities, location, dimensions and specifications of plants, sanitary standards. Also see Reg. 426/57.

The Fur Farms Act, Chapter 154:
- sec. 9 - premises for animals clean, sanitary, and pens and enclosures adequately constructed to prevent escape, etc.

-- no apparent building standards exist at the present time.

The Gas Protection Act, Chapter 156, and Regulations.

The Ground Water Control Act, Chapter 162:
- sec. 10 - provides Lieutenant-Governor-in-Council may regulate methods of boring wells and proper anchorage, casing and cementation of well casings, and prescribing materials; method of abandoning wells.

REVISED STATUTES OF ALBERTA

VOLUME 3

The Homes for the Aged Act, Chapter 171:
- sec. 3 - purpose for the construction, maintenance, homes and low rental housing units;

-- no mention of standards in sec. 11, which provides for regulations, but perhaps sec. 3(c) and 4(b) should be "subject to the proposed Alberta Building Code".

The Hospitals Act, Chapter 174:

- sec. 38 - provides for the power to pass regulations regarding approval of location, design and construction of hospitals, etc. and conditions under which such approval will be granted.

The Human Resources Research Council Act, Chapter 177:

- Objects: - sec. 3, are broad and might duplicate proposed Building Code Council.

The Interpretation Act, Chapter 189:

- will apply to any proposed Alberta Building Code Legislation or the Code itself possibly unless a contrary intention appears therein.

The Alberta Housing Act, Chapter 175, and Regulations.

- sec. 12 - undertake studies, research and experimentation in any field of housing or urban development;
- construct public housing projects; sec. 25, 26, 31;
  (should sec. 12 and sec. 20 be subject to the proposed Alberta Building Code?) Perhaps not, or it would limit Federal-Provincial Housing per sec. 21.

REVISED STATUTES OF ALBERTA

VOLUME 4

The Libraries Act, Chapter 206:

- establish libraries;
- sec. 51 (e) - erect... buildings. The regulation power is general to cover intent of Act.

-- no apparent building standards exist at the present time.

The Limitation of Actions Act, Chapter 209:

i.e. sec. 552 -- 2 years for commencing suit upon breaches of a standard in a statute - this should be realized by the committee; no conflict exists here unless a longer period is desired.

The Lightning Rod Act, Chapter 208, and Regulation 120/63;
(Adopts C.8A - standard B72-1960)

The Liquor Control Act, Chapter 211, and Regulations:

- sec. 23 - buildings constructed by the Board under authority of the Lieutenant-Governor-in-Council may be remodelled, etc. at discretion of the Board.

The Liquor Licensing Act, Chapter 212, Parts 1 and 2:

- see sec. 25(d) and (9) and (10) -- premises must conform to requirement of this Act and regulations thereto. Also sec. 28(e)(i)(ii) and (f); sec. 36, 42, 43, 46, etc; sec. 58, 59.

The Livestock and Livestock Products Act, Chapter 215:

- sec. 5(1)(h) - may make rules and regulations re: location, design, equipment, and construction of stockyards, etc.

-- no apparent building standards exist at the present time.

The Mental Health Act, Chapter 321:

- sec. 32(2)(b) - Empowers the issuing of regulations for "prescribing the standards of construction necessary and equipment required in approved homes";
  (d) inspection of approved homes - (regulations do not appear to refer to building standards presently)

The Municipal Government Act, Chapter 246:

Part 5 -- fire: standards, i.e. electrical lighting, etc.

- sec. 156(e) (f) (h) (i) (j) (l) (o);
- sec. 158 - dangerous buildings, sec. 159;
- sec. 163 - sign; sec. 174 - occupancy permits;
- sec. 193(e) - basement gate-valves;
- sec. 200 - erecting hospitals;
- sec. 212 - airport buildings, structures;
- sec. 223 - plumbing standards by bylaw not inconsistent with Provincial Legislation or Regulation;
- sec. 238 - control of buildings;
- sec. 239 and 240 - minimum municipal building standards bylaws and licenses;
- sec. 273 - construction of any public utility;
- sec. 293 - water taps as approved by the municipality.

REVISED STATUTES OF ALBERTA

VOLUME 5

The Nursing Aides Act, Chapter 263:

- sec. 9 - Minister -- may (c) arrange for the establishment of one or more central schools for training of student nursing aides and powers in sec. 10 to make regulations.

-- no apparent building standards exist at present.

The Nursing Homes Act, Chapter 264:

- sec. 8 and 9 -- board's power to construct... nursing homes;
- sec. 16 - Regulations may be made for prescribing standards, size, type of construction, rated capacity.

The Pipe Line Act, Chapter 275:

- sec. 2(8) - "installation" includes pumping station, treatments and purifying plant, storage facility;
- sec. 46 - regulations may provide for sketches, plans, etc. connected with services supplied. (Separate pipe and fitting standards in Act.)
- sec. 47 -- makes Act conform to Boilers and Pressure Vessels Act.

The Planning Act, Chapter 276:

Part 4

- sec. 121 (1) 5. - fence height; 7. - design character and appearance of buildings; 11. & 12. - signs: size, construction, etc.; 14. - moving, alteration of building;
- sec. 126 1 (a), sec. 140 - enforcement re: sec. 121;
- sec. 155 (1) - experimental housing areas. (Despite building by-laws, etc.)

The Proceedings Against the Crown Act, Chapter 285:

-- mention of the Alberta Building Code Act therein must be made to bind the Crown.

The Provincial General Hospitals Act, Chapter 286:

- sec. 6 - refers to "order in council establishing a provincial hospital", but no building standards are provided for or referred to.

The Public Health Act, Chapter 294:

- sec. (6) (3) (b) - methods of heating, lighting, and ventilation to be adopted therein, etc.

- sec. 7 - regulations may provide for lighting, heating, ventilation, plumbing, (houses, public and charitable institutions, buildings, places of assembly, etc.)
- sec. 8 - the construction, etc., of drains, etc.;
- sec. 29 - design, construction, etc., of -- refuse disposal plants and extension or replacement of existing ones;
- sec. 43 - ventilation, lighting, etc. of excretia removal structures.

The Public Highways Development Act, Chapter 295:

- sec. 27 (1) and (2) (a) - refers to building structures, etc. within defined distances of highways, if unoccupied, and if dilapidated or unsafe, to be remedied to extent directed in the order or demolished, etc. (This might be to a standard different than the Alberta Building Code.)

The Public Utilities Board Act, Chapter 302:

- sec. 85(1) - span wires attached to adjacent buildings;
- sec. 111 - provides for direction of construction, reconstruction, etc.

The Public Works Act, Chapter 303:

- sec. 23 - provides for demolition and erection of fences when construction if a public work is in progress;
- sec. 34 - provides for necessary regulations;

-- no apparent building standards exist at the present time.

The Quarries Regulation Act, Chapter 305:

See Regulation 38/1957 regarding plans for sanitation and appropriateness of washrooms to be approved by the director.

The Radiation Protection Act, Chapter 309:

- sec. 5 - construction of radiation installation to allow for no one but the patient to be exposed to radiation beyond the maximum permissible dose. Also regulatory powers: a separate standard is set up for radiation installations.

The Recreation Development Act, Chapter 314:

- sec. 3 - development of recreational ... facilities;

-- no apparent building standards exist at the present time.

The Research Council Act, Chapter 321:

- sec. 8 and 11 - Powers of the Council may conflict with or duplicate those of the Building Code Council as proposed under the Alberta National Building Code.

The School Act, Chapter 329:

- see part 6, sec. 91 (1) (e) - build residences and dormitories, (f) and offices for the board and its employees;
- sec. 92 (1) (a) - joint construction of a public work or building;
- sec. 94 and 95 - require additions, alterations, construction of school buildings to be approved pursuant to The School Buildings Act and regulations thereunder (plans and specifications approved) unless over 15,000 students are enrolled in the board's schools;
- sec. 99 (1) - the Minister may approve scheme for construction, partial construction, alterations, etc.

REVISED STATUTES OF ALBERTA

VOLUME 6

The Treasury Branches Act, Chapter 372:

- sec. 3 (2) - establishment of Treasury Branches; also
- sec. 19

-- no apparent building standards set up.

The Universities Act, Chapter 378:

- sec. 48 - may conflict with a proposed Alberta Building Code.

The Venereal Diseases Prevention Act, Chapter 382:

- sec. 18 - the Minister may establish and maintain ... venereal disease clinics;
- sec. 17 - provides broadly for regulations.

-- no apparent reference to building code standards.

The Water Resources Act, Chapter 388:

- sec. 2, 23 - 'Works' means any structure, generating plant, etc.
- sec. 14 (2) - applicants to submit detailed plans re: works, etc.;
- sec. 18 and 26 - authorization of works;
- sec. 35 - inspection of works, etc.; and sec. 67;
- sec. 76 - provides for regulations regarding particulars to be set out in applications and governing inspection for works;
- sec. 76, xvii - for the construction, maintenance, etc. and
  xxii of all works pertaining to the Act.
- see also Part 4 construction of works and undertakings by the Minister. Legislation and regulations do not stipulate precise Building Standards but set out detail plan requirements.

The Workmen's Compensation Act, Chapter 397, and all regulations:

- Since the legislation and regulations pertain to working safety standards they may possibly co-exist without conflicting with the proposed Alberta Building Code.

NOTE: This list is subject to further investigation for further rules or regulations and sections that may not have come to light during this portion of the search for conflicting or duplicating Building Standards.